



Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

Claim 1 (currently amended): A semi-rigid viscoelastic foam made from a Part A composition and a Part B composition, said Part A composition comprising 20-50 weight percent isocyanate (NCO), said Part B composition comprising at least 20 parts by weight of ~~a first,~~ amine-based polyether polyol having a propylene oxide extended tip, at least 10 parts by weight of ~~a second~~ an additional polyol selected from the group consisting of filled polyether polyols and unfilled polyether polyols, and 0.4-4 parts by weight catalyst, said Part A and Part B compositions being combined to provide said semi-rigid viscoelastic foam ~~having an index of 70-130~~.

Claim 2 (currently amended): A semi-rigid viscoelastic foam made from a Part A composition and a Part B composition, said Part A composition comprising 20-50 weight percent isocyanate (NCO), said Part B composition comprising at least 20 parts by weight of ~~a first,~~ amine-based polyether polyol having a propylene oxide extended tip, at least 10 parts by weight of ~~a second,~~ an additional, tri-functional polyether polyol, and 0.4-4 parts by weight catalyst, said Part A and Part B compositions being combined to provide said semi-rigid viscoelastic foam ~~having an index of 70-130~~.

Claim 3 (currently amended): A semi-rigid viscoelastic foam according to claim 1 or 2, having an index of 80-115.

Claim 4 (currently amended): A semi-rigid viscoelastic foam according to claim 1 or 2, having an index of about 90-100.

Claim 5 (currently amended): A semi-rigid viscoelastic foam according to claim 1 or 2, said Part B composition further comprising about 3 parts by weight water.

Claim 6 (currently amended): A semi-rigid viscoelastic foam according to claim 1 or 2, said Part B composition further comprising about 6 parts by weight black paste.

Claim 7 (currently amended): A semi-rigid viscoelastic foam according to claim 1 or 2, said isocyanate in said Part A composition being present in the form of 4,4'-MDI.

Claim 8 (currently amended): A semi-rigid viscoelastic foam according to claim 7, said 4,4'-MDI being present in said Part A composition in an amount sufficient to provide an isocyanate (NCO) concentration of about 33.6 percent by weight.

Claim 9 (currently amended): A semi-rigid viscoelastic foam according to claim 1 or 2, said isocyanate in said Part A composition being present in the form of an allophanate-modified MDI prepolymer, said part A composition having an isocyanate (NCO) concentration of about 20-30 percent by weight.

Claim 10 (currently amended): A semi-rigid viscoelastic foam according to claim 1 or 2, said ~~amine-based polyether polyol component comprising a mixture of amine-based polyether polyols including~~ Part B composition comprising monoethanolamine based polyol in an amount of less than 10 parts by weight, triethanol amine based polyol in an amount of 10-30 parts by ~~weight,~~ weight, and ethylenediamine based polyol in an amount of 16-36 parts by weight.

Claim 11 (currently amended): A semi-rigid viscoelastic foam according to claim 1 or 2, said catalyst ~~component~~ comprising amine catalyst in an amount of 0.4-2.5 parts by weight, delayed action catalyst in an amount of 0-1 parts by weight, and trimer catalyst in an amount of 0-1 parts by weight.

Claim 12 (currently amended): A semi-rigid viscoelastic foam according to claim 11, said amine catalyst being tertiary amine catalyst, said delayed action catalyst being a combination delayed action catalyst, said trimer catalyst being a quaternary ammonium salt trimer catalyst.

Claim 13 (currently amended): A semi-rigid viscoelastic foam according to claim 1 or 2, said ~~second~~ additional polyol being a glycerin based polyether polyol.

Claim 14 (currently amended): A semi-rigid viscoelastic foam according to claim 2, said tri-functional polyether polyol being a non-amine based polyether polyol.

Claim 15 (currently amended): A method of making a viscoelastic foam

comprising the steps of:

- a) providing a Part A composition comprising 20-50 weight percent isocyanate;
- b) providing a Part B composition comprising at least 20 parts by weight amine-based polyether polyol having a propylene oxide extended tip, at least 10 parts by weight of a polyol selected from the group consisting of filled polyether polyols and unfilled polyether polyols, and 0.4-4 parts by weight catalyst; and
- c) combining said Part A and Part B compositions to provide ~~said viscoelastic foam~~, ~~said~~ a semi-rigid viscoelastic foam having an index of 70-130.

Claim 16 (currently amended): A method of making a viscoelastic foam comprising the steps of:

- a) providing a Part A composition comprising 20-50 weight percent isocyanate;
- b) providing a Part B composition comprising at least 20 parts by weight amine-based polyether polyol having a propylene oxide extended tip, at least 10 parts by weight of a tri-functional polyether polyol, and 0.4-4 parts by weight catalyst; and
- c) combining said Part A and Part B compositions to provide ~~said viscoelastic foam~~, ~~said~~ a semi-rigid viscoelastic foam having an index of 70-130.

Claim 17 (currently amended): A method according to claim 15 or 16, said semi-rigid viscoelastic foam having an index of 90-100.

Claim 18 (previously presented): A method according to claim 15 or 16, said

Part B composition further comprising about 3 parts by weight water.

Claim 19 (previously presented): A method according to claim 15 or 16, said Part B composition further comprising about 6 parts by weight black paste.

Claim 20 (currently amended): A method according to claim 15 or 16, said isocyanate in said Part A composition being present in the ~~from~~ form of 4,4'-MDI.

Claim 21 (original): A method according to claim 20, said 4,4'-MDI being present in said Part A composition an amount sufficient to provide an isocyanate (NCO) concentration of about 33.6 percent by weight in said Part A composition.

Claim 22 (original): A method according to claim 15 or 16, said isocyanate in said Part A composition being present in the form of an allophanate-modified MDI prepolymer.

Claim 23 (currently amended): A method according to claim 15 or 16, said ~~amine-based polyether polyol component comprising a mixture of amine-based polyether polyols including~~ Part B composition comprising monoethanolamine based polyol in an amount of less than 10 parts by weight, triethanol amine based polyol in an amount of 10-30 parts by ~~weight~~; weight, and ethylenediamine based polyol in an amount of 16-36 parts by weight.

Claim 24 (currently amended): A method according to claim 15 or 16, said ~~catalyst component~~ comprising amine catalyst in an amount of 0.4-2.5 parts by

weight, a delayed action catalyst in an amount of 0-1 parts by weight, and a trimer catalyst in an amount of 0-1 parts by weight.

Claim 25 (currently amended): A method according to claim 24, said amine catalyst[[s]] being tertiary amine catalyst[[s]], said delayed action catalyst being a combination delayed action amine/delayed action tin catalyst, and said trimer catalyst being a quaternary ammonium salt trimer catalyst.

Claim 26 (currently amended): A semi-rigid viscoelastic foam according to claim 1 or 2, said Part B composition further comprising 3-15 parts by weight black paste.

Claim 27 (new): A semi-rigid viscoelastic foam according to claim 1 or 2, having an index of 70-130.

Claim 28 (new): A semi-rigid viscoelastic foam according to claim 1 or 2, said Part B composition having at least 40 parts by weight amine-based polyether polyol, wherein the amounts of all polyether polyols in said Part B composition sum to 100 parts by weight.

Claim 29 (new): A semi-rigid viscoelastic foam according to claim 1 or 2, said foam being recoverable following a high energy impact.

Claim 30 (new): A semi-rigid viscoelastic foam according to claim 29, said foam being substantially 100% recoverable following said high energy impact.

Claim 31 (new): A semi-rigid viscoelastic foam according to claim 1 or 2, wherein on impact with a flat circular impactor having a 4-inch diameter according to test method ASTM F2040, a sample of said foam measuring 5.5" x 5.5" x 1" thick exhibits breakthrough acceleration in the range of 100 to 150 g's for an impact speed of 2-6 meters/second.

Claim 32 (new): A semi-rigid viscoelastic foam, said foam being made from a Part A composition and a Part B composition, said Part A composition comprising 20-50 weight percent isocyanate (NCO), said Part B composition comprising water, at least one catalyst and each of the following, all in parts by weight:

1-15 parts monoethanolamine-based polyol,

6-25 parts triethanolamine-based polyol,

22-40 parts ethylenediamine-based polyol,

0-50 parts filled polyol, and

0-50 parts unfilled polyol;

wherein said Part B composition includes at least one of said filled or unfilled polyols.